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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,919	08/31/2001	Shulong Li	5312	2185

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Milliken & Company
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EXAMINER

SHEWAREGED, BETELHEM

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/943,919

Applicant(s)

LI ET AL.

Examiner

Betelhem Shewareged

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26,37,48,58,62 and 64-66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26,37,48,58,62 and 64-66 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 07/24/2006.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's response along with the Affidavit By Shulong Li filed on 07/24/2006 has been fully considered. Claims 26, 37 and 48 are amended, claims 1-25, 27-36, 38-47, 49-57, 59-61 and 63 are canceled, claims 64-66 are added, and claims 26, 37, 48, 58, 62 and 64-66 are pending.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 64-66 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not provide a support for poly(hexamethylenediamine co-epichlorohydrin), and the MSDS that is attached with the Affidavit By Shulong Li shows that Kymene 736 is amine polymer-epichlorohydrin adduct, not poly(hexamethylenediamine co-epichlorohydrin).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 1774

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 26, 48, 58, 62 and 64-66 are rejected under 35 U.S.C. 102(b) as being anticipated by Vieira et al. (US 5,073,488).

6. Vieira discloses an ink jet recording material comprising a textile support, coated with a coating material for absorbing printing ink (col. 6, lines 53-66). The coating material comprises a dye mordant of amine-epichlorohydrin polycondensate (col. 7, line 56), and UV absorber of benzotriazole (col. 8, line 21). The coated substrate is used for ink jet printing. Since the amine-containing dye mordant is substantially identical to the claimed amine-containing cationic compounds, the amine-containing dye mordant of Vieira possess the claimed range of charge density. The process by which the treatment mixture and the ink are applied is not dispositive of the issue of the patentability of the instant article claims.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vieira et al. (US 5,073,448), as applied to claims 26, 48, 58, 62 and 64-66, above.

9. Vieira does not disclose the claimed amount of the UV absorber. The experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. One of ordinary skill in the art would have been motivated to adjust the amount of the UV absorber in order to optimize the light stabilizing properties of the layer. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.

10. Claims 26, 37, 48, 58, 62 and 64-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nigam (US 6,291,023 B1) in view of Vieira et al. (US 5,073,448) and Mishima (US 6,183,851 B1).

11. Nigam discloses Images printed on a textile substrate coated with a coating composition (abstract). The coating composition is equivalent to the claimed treatment mixture. The coating composition comprises dye mordant (col.12, line 7) and UV absorber (col. 12, line 8). The dye mordant is equivalent to the claimed amine-containing cationic compound. The coating composition is applied on the substrate as a pretreatment prior to printing. The coated textile substrate is printed with suitable ink using ink jet printing method, wherein the ink comprises an anionic colorant (col. 13, line 66 thru col. 14, line 33). Nigam fails to disclose amine-containing cationic compound as the dye mordant.

Art Unit: 1774

12. Vieira teaches an ink jet recording material comprising a textile support, coated with a coating material for absorbing printing ink (col. 6, lines 53-66). The coating material comprises a dye mordant of amine-epichlorohydrin polycondensate (col. 7, line 56), and UV absorber (col. 8, line 15). The coated substrate is used for ink jet printing. Since the amine-containing dye mordant is substantially identical to the claimed amine-containing cationic compounds, the amine-containing dye mordant of Vieira possess the claimed range of charge density.

13. Nigam and Vieira are analogous art because they are from the same field of endeavor that is the ink jet recording medium art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the dye mordant of amine-epichlorohydrin polycondensate of Vieira with the invention of Nigam so as to fix the dye more firmly on the coating can be added to the binder (col. 7, line 43 of Vieira).

14. Nigam fails to disclose specific types of the UV absorber.

15. Mishima teaches an ink jet image recording medium comprising a support and a coating layer on the support (abstract). The coating composition is equivalent to the claimed treatment mixture layer. The coating composition comprises amine-containing cationic compound (col. 15, line 62), and UV absorbers such as benzotriazole-based compound and benzophenone-based compound (col. 16, lines 29-36). The experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. One of ordinary skill in the art would have been motivated to adjust the content of the UV absorber in order to optimize the light

Art Unit: 1774

stabilizing properties of the layer. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.

16. Nigam and Mishima are analogous art because they are from the same field of endeavor that is the ink jet recording medium art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the UV absorbers of Mishima with the invention of Nigam in order to inhibit the discoloration of an image on the recording medium (col. 16, lines 17-21 and 43-49 of Mishima).

17. The process by which the treatment mixture and the ink are applied is not dispositive of the issue of the patentability of the instant article claims.

Response to Arguments

18. Applicant's arguments with respect to claims 26, 37, 48, 58, 62 and 64-66 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

20. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 1774


shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betelhem Shewareged whose telephone number is 571-272-1529. The examiner can normally be reached on Mon.-Fri. 8:00AM-4:30PM.

22. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

23. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

B.S.
October 15, 2006.


BETELHEM SHEWAREGED
PRIMARY EXAMINER